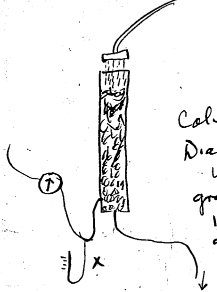
Notebook Series -- Notebooks by Edison
Notebook, N-15-00-00.1

This undated notebook was probably used in late 1914 or in early 1915. All of the entries are by Edison and pertain to the absorption of benzol gas. Included are experiments with various absorbing towers, different arrangements for passing water through the apparatus, varying amounts of gravel in the towers, and different amounts of pressure on the gas entering the towers. The front cover is labeled "Benzol Absorbing Expmts." The pages are unnumbered. Approximately 20 pages have been used.



Column 43" 5/8 long
Dia 6"
weight 64 lbs
gravel 7" of 1½ inch
10" of 1 inch
gravel below
½ inch gravel

No water passing —
With 1 inch water Column of
gas pressure 31 ft gas passed
per minute with 4 inch
water Column × pressure 61 ft
gas passed — with 7"
80 ft passed —

49

144 50 (200

36) 72 00
72

585
200
117.00

64

3.5) 128000 (3436
105
135
50
250

3360 per ft

4) 117
29

64
200
12.800

3360
220
67.200

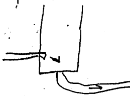
30 gals

3 gal min

1400
3
4200

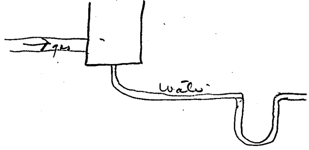
WE passed water thru
Column gently got 585 cc
per minute.
with 7 ft absorbing tower
this gives 200 times more
of 117 Litres per minute.

WE passed gas 39 ft min
One inch water pressure
+ measured water passing
thru to see if less water
or any interference
it was 670. This is wrong
as gas escapes thru water
overflow



117 liters
1400
46800
117
163800
4 | 40,950

WE now put in a U



So gas Cant go thru water
& must go up Column

WE read water passed per min
again, 675 — cc 2nd test 680
apparently the gas helps the
water to flow or the water
feed is wokg faster than at
first, —

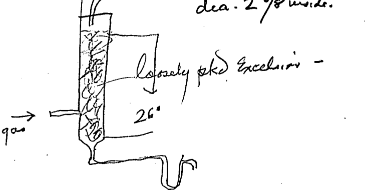
Gas with 1 1/8. Water Column
38 pressure Gives 38 Cubic ft
in 1 minute —

1.8/gal per ton coal

With water running 675cc
We put gas at 1/4" water column
it passes —— 17 cubic ft

1/2" gives	25.5 "
3/4 –	32 "
1"	37 "
1 1/4	42 "
1 1/2	45.5 "
1 3/4 –	49.5
2"	54.5
3"	66"

We put up a glass Column


water
dia. 2 3/8 inside.
loosely pkd Excelsior -
26"
gas

Water passed in 1 min -
950 cc —
Gas pressure 3" —

at 3" water Column pressure 66
66 Cu ft passes per min –

at	2" —	58 Cub ft
at	1 "	40 "
	1/2	25.25 "
	1/4	15 1/4 "

24 Cent is 75 Fahr
20 Cent is 68 Fahr

		Gravel	Excelsior
Gas	3	66	66
	2	54.5	58
	1	37	40
	1/2	25.5	25.25
	1/4	17	15.4

We now fill the 2 3/8 glass tube 1/2 full of 1/2 inch gravel pass 150 cc water per min –

150 CC – water passing

Gas pressure	1/4" water Column	17.5 Cub ft
	1/2	26 "
	3/4	31 1/2
	1"	37 1/2
	1 1/2	46 1/2
		54
	2/3 "	65.75

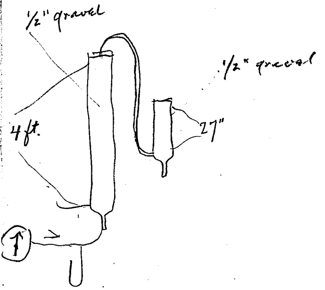
Doubled amount of gravel

3 inch	Water	Column	64 $\frac{1}{2}$
2	"	"	54
1 $\frac{1}{2}$	"	"	45
1"	"	"	36
3/4			30
1/2			23 $\frac{1}{2}$
1/4			15

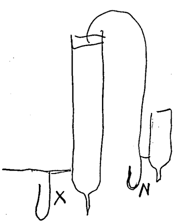
Height gravel 27
1/2 14 -

27
49 (2.33
12)276
240
360
34

27)49 (1
2.4


½" gravel
½" gravel
4 ft.
27"

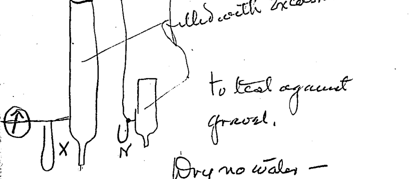
1/4 water column –		9 ½ cubic ft ^{min}
½	"	17.3 "
3/4 –	"	23
1"	"	27.2
1 ½	"	34.5
2	"	42
3	"	52



Two water Column gauges
X & N –

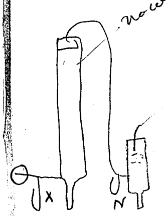
When X is 3" pressure N is 3/4
2 " " 1/2
1 " 1/4

took off N opened up pressure on X
was $2\frac{1}{4}$ inch


filled with Excelsior
to test against ground.
X
N

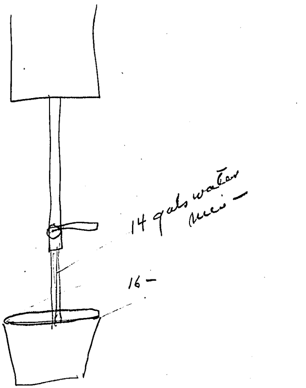
Dry no water —

3 in X N 11/16 —	Cubraftmm 48
2 in X = N 1/2"	" 37.5 —
$1\frac{1}{2}$ X = N 5/16 -	32 —
1 - X = N 1/4	$25.\frac{1}{4}$
3/4 X = N 3/16 -	$21.\frac{1}{4}$
1/2 X = N 1/8	16.3/4
1/4 X = N 3/32.	$11\frac{1}{4}$


no water
water
X
N

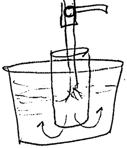
1" on X with water running into small column gives 5/16 pressure —
150 cc water passing per minute — while X is 1"

On the short column of Excelsior - using Aniline Violet, it fairly distributes shows preference for glass sides but can see it way in - there are spots at glass 2" sqr not wet, think when wet with water or oil it will be fairly Even —


14 gals water
min —
16 —

14 gals min is what we want, its a pretty fierce stream & when it strikes water in pail & swashes so it would not rise & Enter grooves on distributing table

Very even, its thrown into water we now try



to see if can stop waves